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REPORT

COMMISSION

FOR

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RELATIVE TO THE MEANS OF PREVENTING

AND CURING THE TUBERCULOSIS OF THE

THE

BY JAMES R. M.

SECTION OF THE

LONDON

PRINTED FOR T. FISHER & PATTERSON

To the COMMISSIONERS for Sick
and Wounded Seamen, &c.

GENTLEMEN,

IN consequence of your letter to me of the 23d. Inst. which required my presence at your office, about one of the clock of the 24th. I accordingly attended, and was introduced and seated before you—when two letters of mine to my Lords Commissioners of the Admiralty were read publicly at your Board.

The first letter signified, that I had the means, or, had it in my power to communicate the means, of preventing in a great degree, and of curing the scurvy at sea, by a method rational and eligible.

The second letter recommended, 1st. that salt provisions, viz. Beef and Pork, should be dressed in *steam*, instead of being boiled in salt water as is customary: and, 2dly, that *stoves* upon Buzaglo's principle, should be used between decks.

The above mentioned letters having been read, the Board very candidly desired, I would inform, and point out to them the means whereby the scurvy was to be prevented, in a great degree, and cured, at sea, by an easy, certain and natural method.—My answer was, I was not prepared; and requested time to digest the matter properly for Your future attention—which was immediately granted.

And now, Gentlemen, with as much speed as circumstances would admit of, I lay before you the following pages—unsupported by any pedantic method, by learned quotations, by great, respectable, far-fetched authorities. If they shall be judged to have any merit, it is derived from truth, from recent facts, from common sense—by no means from any superior talents. Indeed, in such a business, there is neither room for the pride of literature nor of invention to display itself:—frantic speculation, and the frothy powers of the theorist were here greatly absurd and inadmissible. But, in proceeding upon a subject so important, you will pardon me for rejecting every unbecoming delicacy, every unmanly humiliation, every skulking conduct—you will allow me, with deference and respect, to deliver the sentiments of honour, of freedom and of truth: and I trust you will form such inferences

inferences as shall not be derogatory, in any possibly relative manner—observing, in my favour, that were it possible the police of a great city should be so defective, as to suffer any one capital street to remain in such disorder, that it became imminently hazardous to attempt progression in chariot or cart, the man who might be but the remote means of causing it to be paved and rendered pervious, would at least deserve thanks.

Prevention of scurvy, and, indeed, of most diseases, in men of war, naturally refers to board, and lodging, and cloathing—to the nature of air, drink, victuals and apparel: and here we may meet with many obstacles from the rules of service; which, by the bye, should yield to the times, and, to the progress of human understanding.

Were seamen as well accommodated as officers are in general, they would seldom be ailing, they would rarely die.

Our large ships are too small for their complement of men. The third rates should be second rates. The second rates should be first rates.—And, the latter, should greatly exceed their present scale—in order that the people might enjoy more fresh air, so essential to healthy existence.

Pure

Pure air being the pabulum of all the vital functions, professional men, where they may judge best and safest, should make openings of nine or twelve inches diameter, for the reception of circular ventilators—such as we see in windows of public kitchens, &c.—or, for air valves, made in a philosophical and masterly manner, suffering the foul and rarefied air to escape from below, and refusing admission to cold air from above, upon the people in their beds—such air skuttles to be so contrived, and fitted with lids, as not to permit, in any bad weather, the least insinuation of water—for my own part, not being a shipwright, I would have such air valves fore and aft, between every two guns, opening upon deck, near the sides.

There is a great obstruction of air, accumulation and absorption of sweat, and various noxious vapors, arising from the nature and manner of sleeping.

Instead of laying bent and contorted (which produces congestion in the abdominal viscera) between blankets, in hammocks, which are so little attended to in the regularity of flinging and hanging, that, of a-night, there is no passing fore and aft, without crawling—if men were furnished with cots of fifteen or sixteen inches

inches breadth, with proper frames, and hung in horizontal lines—and each man allowed a linen sheet in addition to the present bedding, many good effects would be the result. Cleanliness in this respect (as well as posture) is so essential, that, were it possible, each man should have a clean sheet once in three weeks—especially in warm climates, where blankets, those sponges of disease, are less necessary. Articles of bedding should be washed in fresh water; otherwise, if in salt water, in damp weather, they will always be moist, from the solution, the *giving* of saline particles.

During the summer, and in warm climates, the whole complement should be bathed and washed from head to foot, at least, once a week—face and hands, daily.—Good men do not require this injunction; but those who are most liable to disease, are such who are negligent and backward, and who require excitement.

As moisture cannot be too much guarded against on ship-board, we ought to be more circumspect in washing the decks below. The broom and scraper should be oftener employed than buckets and swabs.

Never wash between decks but on a dry sunny day. In foggy climates, and during cold
moist

moist winters, very seldom; and, in general, less frequently and more consistently than is the custom.

Cast iron stoves, adapted for the purpose, should be used as often as circumstances of service and weather will permit—which stoves would not only remove moisture, the latent nurse of diseases on ship-board, but, by rarefaction, produce a circulation and supply of fresh and pure air.

As to any apprehension of danger from the use of such stoves, I think it is only founded on prejudice; and has little weight when we consider the great advantage to be derived from them. Industry, attention, caution, and ingenuity, surmount many seeming difficulties. Several of the French line of battle ships have ovens between decks, so large that they bake bread daily, in harbours, for the whole ships company: and, I do not know from six weeks experience on board of the *Solitaire*, and from particular inquiry, of any accident having arisen, or likely to arise, from the alarming wood fires, sparkles and smoke, attending them. Every precaution is made use of—every attention bestowed. Such ships are always less sickly than those which have no fires betwixt decks: and with such ovens and fresh ferment-
ed

ed bread, and wine, if the French were more attentive to cleanliness, they would, of course, be still more healthy.

It strikes me, that a tube, originating from the top of a boiler or copper, passing through the galley deck to below — then carried along through the bay,—passing through the ship's side—then continued downwards five or six feet, under the water-line, and then bent upwards, and opening within board would not only afford fresh water, from condensed steam, but also destroy moisture, and circulate air in the sick birth.

Water—cannot be too carefully attended to in quality and distribution. It should, as every one allows, be taken from the best and purest source; and, the vessels to contain it, should be particularly clean. It is to be lamented we cannot have recourse to earthen or glass vessels to preserve it in, instead of wooden ones. But, as the case is, supposing the butts and barrels were paid, or coated, on the inside with melted brimstone, would not the water certainly keep better, and insects be less abundant? or, would it not be expedient to line water casks with lead or pewter, or with something which might effectually prevent the water from being affected by the wood—which
undergoes

undergoes such changes as induce fermentation, &c. in the water—and, fermentation, we well know, always alters the quality of fluids.

Distribution—we are generally less attentive to the expence of water than other nations. We seldom adopt œconomy in water 'till scarcity makes it necessary. There should be plenty, without profusion. Each mess should have its barrique—its daily quantum. Trouble attends this method; but habit reconciles many things—and indolence and industry are incompatible.

Beer—for sea service, should be well made. It should be stronger of the malt, and the allowance proportioned. It is, in general, very turbid, very bad, very ill prepared. This may arise from hurry of service—a dangerous excuse!

One quart, or three pints, of good strong ale, *per diem*, instead of seven pints of small beer, would save some scores of men annually. But, the misfortune is, Gentlemen, articles of eating and drinking, in our Navy, are seldom so good as it is the intention of government they should be.

Rum

Rum, in general, is very indifferent in our fleet, and grog is an unwholesome, dangerous, and poisonous drink for sailors. Every sudden change of drink produces morbid effects at sea. For instance, in a voyage to America, when our beer was expended, the men were served with grog.—They became, from a healthy company very sickly. This was the case on board of other ships—and, there was no other visible cause of disease, at that time. Seamen should be brought to the *prevailing* drink by degrees. Beer, wine, and rum, should be served alternately, until the former be expended.

But, if ~~we~~ *we wish to preserve our seamen*, and cannot supply them with good ale, good porter, or good wine, and must recur to rum, let such a quantity of sugar and lemon juice, or extract, or rob, be added as shall make generous, rich punch, to be served every day instead of grog. The advantages arising from this will more than make amends for the extra expence.

Vinegar—during twelve years, I do not recollect that any purser I have sailed with had a drop of vinegar in his custody, for the use of the ship's company. The liquor in his charge, called vinegar, was, I know not what—it was neither sweet nor sour—it had barely any sensible quality—but, it was a fluid. The boat-

swain's vinegar is also, generally, base stuff.—
Good vinegar is a good thing at sea.

Bread—the staff of life!—suffers greatly in our ships by stowage. New and old bread should never be put together—the latter will assuredly perish the former. Bread should not be started in a heap to be exposed to the devastation of insects, to imbibe moisture, and to be damaged by leaky decks, by drains, and, by the generation of heat from fermentation in moist vegetable solids.

The biscuit of our navy is certainly better than that of some other nations: but, I think, it should be made of the best and finest flour—one ounce of which would necessarily contain the nutriment of two or more ounces of coarse bread. In order to preserve and keep it, as bread should be kept at sea, it should be put up in tight casks. By the adoption of the finest flour for biscuit in preference to coarse husky flour, and meal, our sailors being supplied with a most nutritive, salutary, farinaceous mucilage, so eminently requisite to sheathe, to prevent, and correct acrimony and corrosive tendency in the system, would be much more healthy.

Paste,

Paste, or dough, at sea, especially, being very indigestible, and, consequently, insalubrious; instead, therefore, of the common viscid dumplings and doeboys, let a mass of flour be properly leavened, and sweetened with treacle, for the ship's company by a clever baker, who should give each mess its allowance to be boiled as usual.

Pease, if the water be hard, or, if there be a scarcity of it, I think might be dressed in steam; which may be directed upon them from the top of the vessel containing them, by means of tubes.

The state of the mind has a peculiar influence upon the body; and, so far as it is connected with the medical province, is highly necessary of consideration as a principal remote cause of many diseases.

It may happen, there shall be, sometimes, a certain loftiness, an abominable insensibility of conduct, in peculiar officers, which would seem to border upon a species of arbitrary behaviour—if not tyranny; occasioning, among brave inferiors, gallant seamen, that lugubrious affection, known by the name of—*a broken heart*!

The mode of pressing men upon their arrival from East India, and other long voyages —

dragging human nature from all her dearest ties, attractions and affections,—tearing the expanded heart of filial joy, from the blessed, the tender embraces, of a fond mother—perhaps a widow!—or, from the arms of his loving wife—from his helpless little ones!—would seem to cry aloud for the intervention of government. Men, pressed into the service, under such circumstances; seldom do well—they care not for life, nor its joys—they soon become sick—they seldom recover. It should be considered, that british sailors are greatly susceptible of every generous passion,—that the finer feelings of humanity, are no strangers to the honest sailor's heart,—and, that cruel harsh treatment, generally produces among them, that melancholy condition of the soul, which depresses, and extinguishes, every glorious passion—all heroic ardor.

There are manners pleasing, affable, gentle, engaging, fascinating—consistent, in superior rank,—the true characteristics of virtue, of courage, of greatness of mind—and very compatible with military discipline, which never fail to procure universal love, and esteem, and respect—when a contrary conduct shall have constantly a reversed effect—more especially, where we have to deal with the lower orders of men.

Having

Having sketched a little upon the means of prevention, I shall next proceed to enumerate, and describe, the means of curing the scurvy,—upon which I shall be brief,—and so as just to enable the board, to form a proper answer, to my Lords Commissioners of the Admiralty, relative to my letters to their Lordships, upon the subject; which is now submitted to the opinions, and determinations of this board.

Having read many tracts and books, by eminent and judicious men, upon the scurvy—particularly the works of the learned Dr. James Lind, Physician to the Royal Hospital at Haslar; having bestowed a studious and serious attention upon the nature, and causes of that disease, and having had some practical experience in the cure of it, I am religiously persuaded that the scurvy cannot be cured on shipboard, but by the productions, the blessings, of the vegetable kingdom. Here, bountiful nature presents us with an ample source of certain relief: and, if our poverty, our inclinations, our principles, our prejudices, decline her gifts, the fault shall not be mine.

Sugar. — I will not here enter into any detail of its virtues, its effects, in the animal body

body as a medicine, or, as an article of diet, superlatively nourishing, and, antiseptic. — Suffice it to say, that sugar is the grand basis, upon which we must raise our superstructure. I have known, in the West Indies, seamen, from the American station, cured of scurvy, in a few days, merely by the juice of the sugar cane.

Secondly, Fruits, and their juices.

Thirdly, Effences, or extractions.

Fourthly, Roots, and expressed juices of vegetables.

Fifthly, Barks.

And, Sixthly Berries, and, their jellies.

From these materials we are to form treasures of health, conserves and preservations to be administered dietetically, and medically.

Instead of currants, and raisins, I would propose, acid apples, and berries, preserved with sugar, to be served on the days when the leavened puddings, are issued: And, as these conserves require no dressing, let them be used with the boiled pudding. Such food will no doubt, appear to be proper for scorbutic patients

patients: and I would recommend such a diet to be general among the sick—Allowing each man, after his meal some generous punch, made with rob of lemons.

The medicine I propose is this. — Having squeezed the juice out of the lemons and bitter oranges to make rob or extract of it, let the rinds be made into a conserve with sugar; to every pound of the conserve, let there be added one ounce of the powder of peruvian bark, and half an ounce of powdered ginger, and half an ounce of rob of lemons. Let each scorbutic patient take of this, four ounces in the course of a day; and, after each dose, let him drink half a pint of the following drink, which will be found preferable to other preparations.

Let the virtue of malt be extracted by decoction, in which there must be hops, chamomile flowers, and juniper berries; let the decoction be evaporated to such a consistence, that an ounce of the extract shall contain the virtue of much malt. Let such extract be put in glazed pots for sea service, so that each pot may contain a proportion for a certain quantity of wort—such wort to be as strong as the wort of burton ale, and if stronger, it will be the more efficacious. If a brewer, and brewing utensils were allowed, how easily might we make
good

good ale from such extract for the use of the sick.

Being perfectly assured of the suddenly salutary effects of the rob of lemons in all cases where we use the elixir of vitriol without any sensible effect, might it not be necessary to allow every surgeon a certain quantity of it?

That the juices of sorrel, scurvy grass, cresses, &c. &c. and that many antiscorbutic roots and berries may be preserved for a length of time, is positively certain. By a person of an active and inquisitive turn of mind, interested in, and devoted to the subject, many useful acquisitions would naturally in the course of time and of correspondence be added. But I shall not enter farther upon the subject at present, trusting that what I have already advanced will be sufficient to explain the substance and purport of my letters to my Lords Commissioners of the Admiralty.

It does not lay with me, from any estimation of the expence of such a method to speak of its expediency, notwithstanding I am perfectly convinced of its necessity, and, that it should be put in our power to say, in His Majesty's Navy, *ubi morbus ibi remedium*: but it might be thought by some, to be unbecoming and presumptive to enlarge upon the sufferings of his Majesty's service by the death of seamen in foreign

foreign parts ; that the loss of one seaman may be equal to the loss of at least 40 l. sterling to his country. It is enough for my purpose to reflect, that I have not troubled you with vain theories, with idle speculations, with crafty schemes. I can claim no merit of invention : I claim no reward—I have merely delivered the sense of ages, dressed in my own stile, my own words : — concluding with a firm coincidence of sentiment, that the Scurvy can only be prevented and cured, on board of His Majesty's ships, by such means as this Letter points out.

I am, very respectfully,

Gentlemen,

Your most obedient,

And humble Servant,

JAMES RYMER:

London, April 25th, 1782.

foreigners; that the loss of one human may be equal to the loss of at least 40. I feeling to his country. It is enough for my purpose to reflect, that I have not troubled you with vain theories, with idle speculations, with empty promises. I can claim no merit of invention: I claim no reward—I have merely delivered the lens of ages, distilled in my own mind, my own words:—confronted with a firm coincidence of experiment, that the Scruvy Lens may be preserved and used, on board of His Majesty's ships, by such means as this Letter points out.

I am, very respectfully,

Gentlemen,

Your most obedient,

And humble servant,

JAMES RYMER.

London, April 21st, 1782.

